Underground Injection Control System
Annual Report

Permit Year 9
(July 1, 2020 – June 30, 2021)

Submitted to:
Oregon Department of Environmental Quality

Submitted by:
City of Eugene

Submitted in Accordance with the
Requirements of Water Pollution
Control Facility (WPCF) Permit
Number 103047, File Number 119428

December 30, 2021

CITY OF EUGENE, OREGON

WATER POLLUTION CONTROL FACILITY
UNDERGROUND INJECTION CONTROL SYSTEM ANNUAL REPORT

The City hereby submits this Water Pollution Control Facility (WPCF) Underground Injection Control (UIC) System Annual Report for Permit Year 9, covering the period of time from July 1, 2020 through June 30, 2021, in accordance with WPCF UIC Permit Number 103047, File Number 119482, issued January 22, 2013 and modified December 28, 2015. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Scott Milovich AIC for Matt Rodrigues (Dec 28, 2021 19:05 PST)

Matt Rodrigues, P.E., Public Works Director
Public Works Department
99. W. 10th Ave., Suite 370
Eugene, Oregon 97401
541-682-6877

December 30, 2021

Staff contact for UIC Permit: Therese Walch
Therese Walch (Dec 28, 2021 16:14 PST)

Therese Walch, P.E., Water Resources Manager
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541-682-5549

Underground Injection Control System Annual Report
Permit Year 9

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1. Introduction and Permit Background

Underground Injection Controls (UICs), more commonly referred to as "drywells" in Eugene, collect stormwater runoff from adjacent areas and direct it into the ground as opposed to directing it to a piped system or open waterway. The federal Safe Drinking Water Act regulates stormwater drywells through the Water Pollution Control Facility (WPCF) UIC permit program which, in Oregon, is administered by the Department of Environmental Quality (DEQ). Annual reporting is a requirement of the UIC permit, and this document is City of Eugene's (City) ninth annual UIC report. This report fulfills Schedule B, Item 4, of the City's first-term UIC Permit (Number WPCF-DOM-UIC-103047, DEQ File 119482) issued January 22, 2013 and modified December 28, 2015.

The City's UIC permit authorizes the discharge of stormwater and certain incidental non-stormwater fluids into City-owned or operated UICs at multiple locations within its city limits. The permit includes:

- Schedule A - control and limitation conditions including authorized discharges, permit action levels for certain pollutants and responses for any exceedances thereof, implementation of best management practices (BMPs), and horizontal setbacks to water supply wells;
- Schedule B - monitoring and reporting conditions including an initial (first permit year) and updated (fifth permit year) System-Wide Assessment, development and implementation of a UIC Stormwater Monitoring Plan, annual reporting, and conditions related to closure of UICs;
- Schedule D - special conditions including maintaining adequate legal authority, identifying personnel responsible for the permit, reporting of newly discovered UICs, submitting a UIC System Management Plan including a UIC Stormwater Monitoring Plan, and adaptive management including the submittal of an evaluation of emerging pollutants (fifth permit year); and
- Schedule F - general conditions.

The City's initial UIC System-Wide Assessment, UIC System Management Plan and UIC Stormwater Monitoring Plan were submitted to DEQ on June 17, 2013 and approved on August 13, 2013. An updated System-Wide Assessment was submitted to DEQ on March 30, 2018.

Subsequent to the first two years of UIC stormwater sampling in which pollutant concentrations were well below the associated permit action levels for all samples taken, the City requested a modification to its UIC permit to reduce sampling requirements. DEQ determined that, based upon the City's sampling results, stormwater discharges to Eugene's UICs pose a low risk of adversely impacting drinking water wells. DEQ issued Modification #1 to Permit #103047 on December 28, 2015, in which the City's required UIC sampling frequency was reduced and future sampling efforts were focused on the periods leading up to the mid-permit-term assessment (UIC permit year 5) and the end of permit cycle and next permit renewal application (UIC permit year 9).

The City's UIC Permit, including Major Modification #1 is included in this report as Appendix A. The UIC Stormwater System Management Plan, including the updated UIC Stormwater Monitoring Plan

incorporating the approved sampling frequency and timing changes, is included in this report as Appendix B.

This UIC System Annual Report for Permit Year 9 covers the period of time from July 1, 2020 to June 30, 2021 which coincides with the City's Fiscal Year 2021. The UIC report contains all required elements of an annual report, in accordance with permit Schedule B.4. Table 1-1 indicates where, in this report, the Schedule B.4 information is located. A summary of additional deliverables required by the permit and their associated submittal dates are listed in Table 1-2.

Table 1-1. Annual Reporting Conditions and Location in This Report

Schedule B.4.	Description	Location in This Report
a	Results of stormwater monitoring conducted over the reporting year	Section 2 and Appendix C
b	Permit Schedule A.2, Table 1 exceedances and related actions to address them	n/a
c	Actions taken to implement UIC System Management Plan and any proposed modifications to the UIC System Management Plan	Section 3
d	Actions described in UIC System Management Plan that City was unable to meet and why	n/a
e	Injection systems closed, retrofitted, or installed during the reporting year (Permit Year 9, City's FY 2021)	Section 4 and Appendix D
f	Injections systems to be installed, modified, converted, or closed during the upcoming reporting year (Permit Year 10, City's FY 2022)	Section 5 and Appendix E
g	Printed and electronic copies of this report including tabular summary of results and description of significant findings	Section 6

Table 1-2. Additional Permit Deliverables and Submittal Dates

Schedule	Description	Date Submitted
B.1	System-wide assessment	June 17, 2013
A.7.b	Groundwater protectiveness demonstration	June 17, 2013
D.5	UIC system management plan	June 17, 2013
B.2	Stormwater monitoring plan (update submitted with Year 4 UIC Report)	June 17, 2013, updated Sept. 2015
D.6	Emerging pollutants evaluation (submitted with Year 4 UIC Report)	December 26, 2017
B.1	Updated system-wide assessment	March 30, 2018

2. UIC Stormwater Monitoring

The purpose of UIC monitoring is to assist with ongoing efforts to characterize stormwater pollutant discharges within representative UIC drainage areas, determine potential pollutant sources, assess the effectiveness of the City's best management practices applicable to UICs and whether these are protective of groundwater, identify instances where corrective action may be needed to protect groundwater, and assist with the adaptive management of the stormwater program.

Stormwater UIC sampling during Permit Year 9 was conducted at three locations determined to be representative of the three main geographic areas where UICs are most prevalent in Eugene. Samples were taken of stormwater flowing into sedimentation manhole structures just upstream of each of the three UICs . Sampling locations are listed below and shown in Figure 2-1:

- Corliss Lane – City manhole #73092, upstream of DEQ Well #43
- Marjorie and Downing – City manhole #99302, upstream of DEQ Well #105
- Shenstone and Tyson – City manhole #73919, upstream of DEQ Well #66

Samples were collected during two storm events in the Year 9 reporting period (11/13/2020 and 12/30/2020). All samples taken were analyzed for pollutants specified in the UIC Permit Schedule A.2, Table 1. Sampling and analysis procedures and methodologies were conducted as per the UIC Stormwater Monitoring Plan. Table 2-1 presents a summary of laboratory results. Appendix C of this report includes the raw data. All analyte concentrations for the 2021 monitoring period, as well as the historical data set, were less than the associated UIC Permit Action Levels.

Results of the UIC stormwater monitoring were also included in the City's Year 2021 MS4 Stormwater Annual Report, Section 4.4.1. and Appendix A, submitted to DEQ on November 30, 2021. The full MS4 report is available on the city's web site at: www.eugene-or.gov (follow links to: Services > Stormwater > Planning, Permits and Regulations > MS4).

Figure 2-1. UIC Storm Event Monitoring Locations

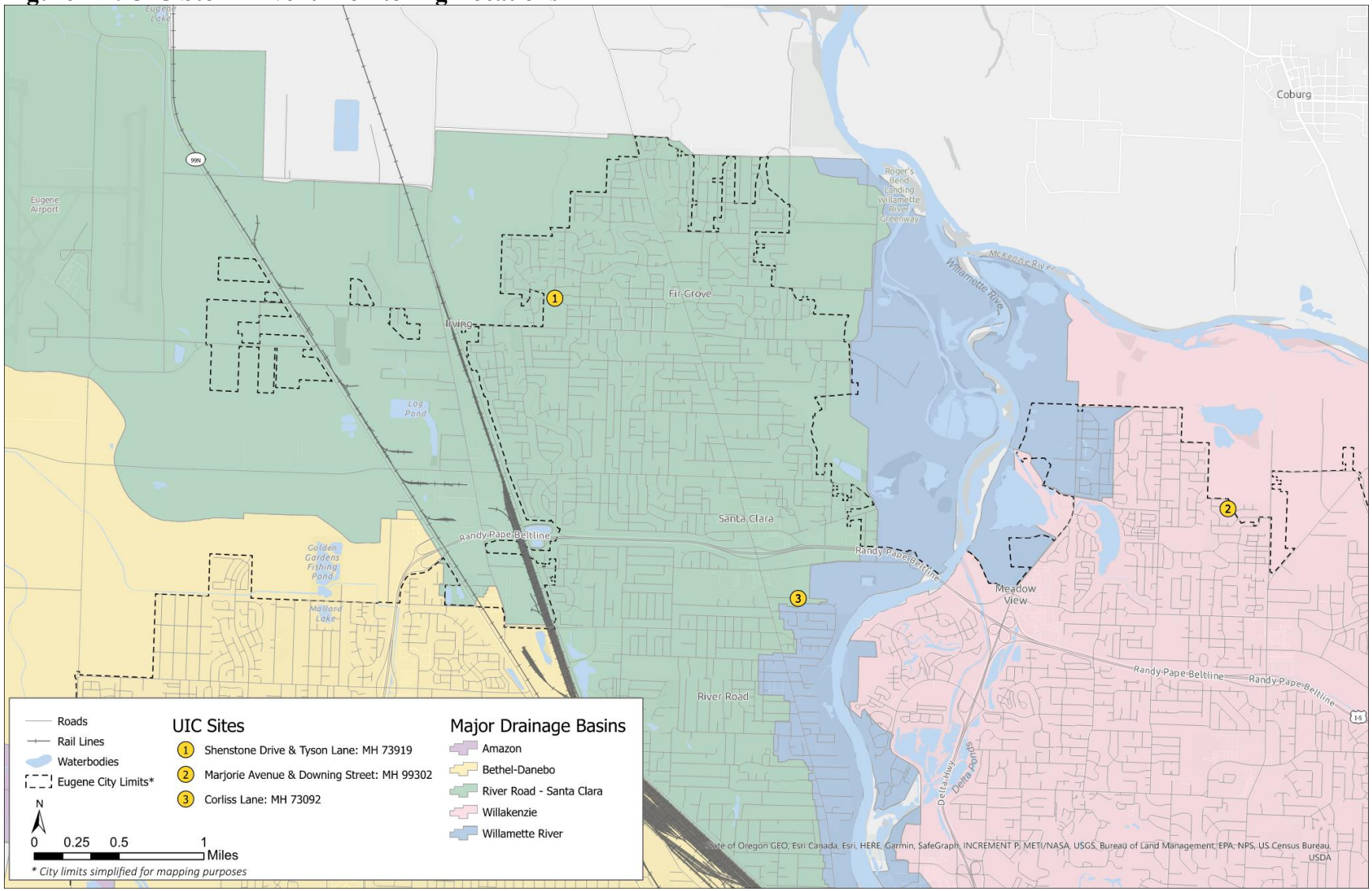


Table 2-1 UIC Storm Event Monitoring Summary					
Location	**Analyte**	**Permit Year 2020/2021 Geomean**	**Historical Data Geomean**	**Permit Year 2020/2021 Data Maximum**	**Permit Action Level**
		Units: µg/L			
Corliss Lane; MH 73092	Copper, Total	9.27	3.97	12.30	1,300
	Lead, Total	1.982	1.44	2.100	500
	Zinc, Total	69.8	53.4	102.0	50,000
	Benzo(a)pyrene	<0.031	<0.10	<0.031	2
	Pentachlorophenol	<0.34	<0.52	<0.34	10
Marjorie & Downing; MH 99302	Copper, Total	2.16	1.57	2.48	1,300
	Lead, Total	0.085	0.184	0.116	500
	Zinc, Total	82.3	58.4	293.0	50,000
	Benzo(a)pyrene	<0.031	<0.065	<0.031	2
	Pentachlorophenol	<0.34	<0.40	<0.34	10
Shenstone & Tyson; MH 73919	Copper, Total	3.02	1.53	4.78	1,300
	Lead, Total	0.186	0.148	0.386	500
	Zinc, Total	43.5	222	96.9	50,000
	Benzo(a)pyrene	<0.031	<0.064	<0.031	2
	Pentachlorophenol	<0.34	0.53	<0.34	10
Analyte concentrations do not exceed Permit Action Levels. Sampled Storm Events: 11/13/2020 and 12/30/2020.					

3. UIC System Management Plan Implementation

The City's UIC System Management Plan describes the overall program and activities that the City will continue to implement throughout the UIC permit term to protect groundwater quality and meet permit requirements. As described in the UIC System Management Plan, under its NPDES MS4 permit, the City implements a comprehensive stormwater management program including a set of 24 best management practices (BMPs) that prevent, reduce, and mitigate for stormwater-related pollution.

Regardless of whether stormwater ultimately discharges to surface water (governed by the City's MS4 permit) or to a UIC (governed by the City's UIC permit), the full set of BMPs is employed, including in the following categories:

- Public outreach and education,
- Source controls and pollution prevention,
- Construction site management,
- New development standards,
- Operations and maintenance,
- Capital projects, and
- Illicit discharge detection and spill response

The Year 2021 MS4 Stormwater Annual Report provides detailed information regarding implementation of the City's stormwater management program during the reporting period. Some of the program areas most directly related to UICs, and the location within the report with information describing the programs and status, are:

- Education and Outreach – Section 3.1 (pages 20 – 30)
- Operation, Maintenance, and Housekeeping – Section 3.2 & 3.4 (pages 31-46 and 57-60)
- Accidental Spills and Illicit Disposal of Wastes/Contaminants – Section 3.3 (pages 47-56)
- Capital Improvements and Data Management – Section 3.6 (pages 71-74)

The City does not have any known public UICs that receive stormwater from loading docks, refueling areas, areas of hazardous and toxic material storage or handling, materials or handling areas, or other discharges that may contain pollutants above levels of concern.

As referenced above, a description of the BMPs related to spill response and illicit discharge controls is included in Section 3.3 of the Year 2021 MS4 Stormwater Annual Report, but, in summary, practices that enable the City to effectively respond to the potential threat to groundwater of accidents, spills, illicit discharges, and emergency fire-fighting activities include the following:

- Mobilization of vactor trucks operated by the City's Public Works Department
- Full-time spill response staff with access to adsorbent materials and catch basin blockers
- 24-hour spill response capability
- 24-hour on-call staff list for staff with the ability to respond to such events
- Agreement with an independent hazardous materials collection and disposal company in the event additional assistance is needed
- Stormwater Intergovernmental Agreement with Lane County which includes provisions for coordinating and providing services for response to illicit discharges and spills in the unincorporated area outside of Eugene city limits and inside the Eugene urban growth boundary.

No modifications to the UIC System Management Plan are proposed at this time.

4. UICs Closed, Retrofitted, or Installed During Permit Year 9

As described in the UIC System Management Plan, the City's Capital Improvement Program includes a line item for public UIC decommissioning projects, called the "Drywell Elimination Program." The City has prioritized highest the decommissioning or retrofitting of public UICs that do not meet the vertical and horizontal separation distances determined by the April 2013 Groundwater Protectiveness Demonstration (GWPD) report.

Notice of planned decommissioning of 2 UICs in the Autumn/Ross/Moore-Oak and Corliss/Carolyn/Ono areas was provided to DEQ in the City's Year 8 UIC Report. During permit year 9, the city completed decommissioning of the Autumn UIC (DEQ Well #49) and retrofitted one associated UIC (DEQ Well #92)

as part of that project. The Corliss/Carolyn/Ono decommissioning project was in the design phase during permit year 9 and the associated UIC (DEQ Well #42) will be decommissioned in Permit Year 10.

Table 4-1 lists the UICs decommissioned and retrofitted in permit year 9. Appendix D includes a schematic drawing of the Autumn area project completed in Year 9. UIC #49 was abandoned in place and replaced with stormwater planters and a new piped system that connects the overflow to a second set of stormwater planters that overflow to existing UIC #92. UIC #92 will continue to remain in use, with pretreatment provided by the upstream stormwater planters. UIC #92 was not identified as necessary to decommission based on GWPD separation distances and is in a low-lying area thus important to retain for localized drainage. Closure of UIC #49 included, as necessary, removal of water and sediment from existing curb inlets, cleaning and plugging of pipes leading to the UIC with grout, removal of cleanout caps, and restoration of the surface to match surrounding conditions.

Table 4-1. UICs Decommissioned or Retrofitted in Permit Year 9

DEQ Well #	City Structure ID #1	City Structure ID #2	Project Name	Characteristic Leading to Priority for Decommissioning or Retrofitting	Action Taken
49	73306	71805	Autumn	Minimal separation to groundwater; Within GWPD horizontal setback	Abandoned in place
92	81477	81479	Autumn	Minimal separation to groundwater; Exceeds protective GWPD setback	Retrofitted with stormwater planters for pretreatment

5. UICs to be Installed, Modified, Converted or Closed in Permit Year 10

Table 5-1 lists 3 UICs planned for decommissioning in permit year 10. These are high priority for action due to not meeting separation distances determined by the City's 2013 GWPD.

Appendix E includes schematic drawings showing the location of the three Drywell Elimination Project areas. Design for these projects will be completed in early calendar year 2022 and typically incorporate replacing the existing UICs with a new connected piped system that incorporates water quality facilities to serve the UIC catchment areas. UIC closure procedures will be reflected in the projects' plans and specifications, including removing water and sediment, if present, from all sedimentation manholes and curb inlets, cleaning and plugging pipes leading to UICs with grout, removing cleanout caps as necessary, and restoring the surface to match surrounding conditions.

Table 5-1. UICs Planned for Decommissioning in Permit Year 10

DEQ Well #	City Structure ID #1	City Structure ID #2	Project Name	Characteristic Leading to Priority for Decommissioning	Proposed Action
42	73110	73109	Owosso*	Minimal separation to groundwater; Within GWPD horizontal setback	Abandon in place
67e	75462	75463	Holly	Minimal separation to groundwater; Within GWPD horizontal setback	Abandon in place
82b	72331	73115	Calumet	Minimal separation to groundwater; Within GWPD horizontal setback	Abandon in place

*Project name formerly referred to as "Corliss/Carolyn /Ono"

6. UIC Information Including Copies of This Report

Additional information about the City's Drywell Elimination Program, including completed, current and future projects, is provided on the City's web site at: https://www.eugene-or.gov/stormwater (select Drywell Decommissioning). An electronic copy of this report will be posted on the City's web site upon approval of the report by DEQ.

APPENDICES

A. UIC Permit, including Major Modification #1
B. UIC System Management Plan, including updated UIC Stormwater Monitoring Plan (2015)
C. UIC Stormwater Monitoring Data Permit Year 9
D. Schematic: 2021 Drywell Elimination Program – Autumn Area
E. Schematic: 2022 Drywell Elimination Program – Holly, Calumet, Owosso Areas

APPENDIX A

UIC Permit, including Major Modification #1

Major Modification #1

Water Pollution Control Facilities Permit
For Class V Stormwater Underground Injection Control Systems

Department of Environmental Quality

700 NE Multnomah Street, Suite 600, Portland, Oregon 97232
(503) 229-5263

Issued pursuant to ORS 468B.195 and 40 CFR Parts 144, 145 and 146, implementing the Federal Safe Drinking Water Act requirements for Underground Injection Control.

ISSUED TO:
City of Eugene
99 East Broadway
Eugene, Oregon 97401

SOURCES COVERED BY THIS PERMIT:
Type of Waste: Storm Water and Incidental Non-Stormwater Fluids
Outfall: Multiple Individual Injection Systems
Method of Disposal: Class V Underground Injection Systems

SYSTEM TYPE:
Class V Underground Injection Control Systems

SYSTEM LOCATIONS
Multiple locations within the City of Eugene

Waters of the State: Groundwater

This modification shall be attached to and made part of Permit No. 103047

Matt Kohlbecker
Senior UIC Hydrogeologist

12/21/2015
Date

Christine Svetkovich
Water Quality Manager

12.28.2015
Date

MODIFICATION #1

WPCF Permit #103047 - Schedule B

Schedule B, Condition 2.b of WPCF Permit #103047 is replaced with the following:

b. Unless otherwise approved by DEQ in writing, the Stormwater Monitoring Plan must include ~~annual~~ sampling of Schedule A, Table 1 constituents **in Year 5 (July 1, 2016 through June 30, 2017) and Year 9 (July 1, 2020 through June 30, 2021) of the permit.**

Stormwater Discharge Monitoring Plan

Section II of the approved June 2013 City of Eugene UIC Stormwater Monitoring Plan ("Monitoring Program") is replaced with the following:

The UIC stormwater monitoring described in this plan will be managed by the City of Eugene staff in the Public Works Department. Program managers in the Engineering, Maintenance, Parks & Open Space, and Wastewater Divisions will be responsible for ensuring all plan elements are developed, implemented, and managed as described.

Sampling ~~under this plan will commence~~ **will be initiated** on July 1, 2013, ~~for the 2013-2014 monitoring year and continue for the duration of the permit term~~ **and will be conducted during the following Permit Years (and corresponding sampling timeframes):**

- **Permit Year 2 (July 1, 2013 through June 30, 2014)**
- **Permit Year 3 (July 1, 2014 through June 30, 2015)**
- **Permit Year 5 (July 1, 2016 through June 30, 2017)**
- **Permit Year 9 (July 1, 2020 through June 30, 2021)**

Water Pollution Control Facilities Permit
For Class V Stormwater Underground Injection Control Systems

Department of Environmental Quality

2020 SW Fourth Avenue, Suite 400, Portland, OR 97201
(503) 229-5263

Issued pursuant to ORS 468B.195 and 40 CFR Parts 144, 145 and 146, implementing the Federal Safe Drinking Water Act requirements for Underground Injection Control.

ISSUED TO:
City of Eugene
99 East Broadway
Eugene, Oregon 97401

SOURCES COVERED BY THIS PERMIT:
Type of Waste: Stormwater and Incidental Non-Stormwater Fluids
Outfall: Multiple Individual Injection Systems
Method of Disposal: Class V Underground Injection Systems

SYSTEM TYPE:
Class V Underground Injection Control Systems

SYSTEM LOCATIONS:
Multiple locations within the City of Eugene

Waters of the State: Groundwater

Effective Permit Issuance Date: January 22, 2013
Permit Expiration Date: December 31, 2022
Permit Number: WPCF–DOM-UIC–103047
DEQ File Number: 119428

This permit is issued based on the Land Use Compatibility Statement in the permit record.

Greg Aitken, RG
Senior Hydrogeologist

1/22/2013
Date

Zach Loboy
Manager, Stormwater

1/25/2013
Date

DEFINITIONS

1. *We* or *us* means the Oregon Department of Environmental Quality (DEQ).
2. *You* means the permittee, person, legal entity, organization, or municipality that is applying for or has received coverage under this permit.
3. *Groundwater protectiveness demonstration* and *demonstrate that groundwater is protected* mean that you have modeled or otherwise scientifically shown that the discharge will not cause or contribute (a) to an exceedance of an applicable maximum contaminant level under 40 CFR part 141 or of a groundwater quality reference or guideline level under OAR chapter 340, division 040, at a well that is or could be used for drinking water or (b) to any other reduction in the quality of water withdrawn from a well that makes the water no longer suitable for drinking, irrigation, or other beneficial uses that are made of the water.
4. *Endangerment of health or the environment* means that discharge to an underground injection system is reasonably likely to lead to pollutant concentrations at a point of groundwater use that (a) exceed an applicable maximum contaminant level under 40 CFR part 141, or (b) exceed a groundwater quality reference or guideline level under OAR chapter 340, division 040, or (c) otherwise harm the beneficial use of groundwater. An exceedance of a discharge action level does not in itself constitute an endangerment of health or the environment.
5. *Definitions* of 40 Code of Federal Regulations (CFR) part 144.3 and Oregon Administrative Rules (OAR) 340 Divisions 040, 044, and 045 apply to this permit unless the definitions are inconsistent with the provisions of the permit.

PERMITTED ACTIVITIES

The City of Eugene (permittee) owns or operates Underground Injection Control systems (UICs, or *injection systems*) to manage stormwater. These injection systems are individual point sources that discharge stormwater and other incidental fluids below the ground surface.

As provided under federal law, this is an *area permit*, which means it covers all permittee-owned or permittee-operated injection systems for stormwater and incidental fluids, located at multiple locations within the city limits of Eugene, as authorized under this permit.

Until we modify or revoke this permit, or until it expires, we authorize you to construct, install, modify, operate, or close (decommission) injection systems in accordance with this permit. We also authorize you to discharge stormwater or other fluids specifically identified in this permit into injection systems that are under your ownership or operation, or that you will construct, or that will be transferred to your ownership or operation while the permit is in effect, provided you conform to the requirements, limitations, and conditions described in the following schedules:

Any other direct or indirect discharge of waste to waters of the state or to an underground injection system is prohibited, unless specifically authorized by this permit; by another DEQ permit, agreement, authorization, or order; or by Oregon state or administrative rule.

SCHEDULE A
CONTROL AND LIMITATION CONDITIONS

1. **Authorized Discharges.** You may discharge stormwater into your injection systems in accordance with the conditions of this permit. You may also discharge the incidental non-stormwater fluids listed below into your injection systems. If any of these non-stormwater discharges cause or contribute to an exceedance of the action levels in Table 1, you must reduce or eliminate the discharge of pollutants associated with the source.

a. Water line flushing;
b. Landscape irrigation;
c. Uncontaminated groundwater infiltration;
d. Uncontaminated pumped groundwater;
e. Discharges from potable water sources;
f. Water from potable groundwater monitoring wells;
g. Draining and flushing of municipal potable water storage reservoirs;
h. Foundation drains;
i. Air conditioning condensate;
j. Springs;
k. Water from crawl space pumps;
l. Footing drains;
m. Lawn watering;
n. Individual residential car washing;
o. Charity car washing;
p. Vehicle washing that does not use detergents or hot water;
q. De-chlorinated swimming pool and fountain discharges;
r. Incidental street wash water;
s. Routine external building washdown and pavement wash waters that do not use detergents or hot water.
t. Discharges or flows from emergency fire-fighting activities provided you take precautions, to the extent practicable, to protect injection systems during emergency fire-fighting activities. Wash down of spills into any underground injection system is prohibited;
u. Discharges of treated water from investigation, removal, and remedial actions selected or approved by DEQ pursuant to Oregon Revised Statutes (ORS) Chapter 465 (Hazardous Waste and Hazardous Materials);
v. Start-up flushing of groundwater wells; and
w. Other similar temporary discharges of uncontaminated water.

2. **Action Levels.** We have established action Levels for pollutants in Table 1. The action levels are guideline concentrations, not limitations; an action level exceedance, therefore, is not a permit violation. The exceedance of an action level, however, may require corrective action in accordance with Schedule A, conditions 4 and 5. The action levels apply at the point of discharge into the underground injection system. You may request changes to these action levels at any time during the permit period, especially if they change based on a groundwater protectiveness demonstration. After two years of monitoring and a minimum of four samples you may request in writing to DEQ that monitoring of specific pollutants be eliminated based on monitoring results. You must incorporate approved changes into your Stormwater Monitoring Plan.

TABLE 1 – Action Levels for Pollutants	
Monitoring Parameter	**Action Level at Injection Point (µg/L)**
Benzo(a)pyrene	2
Pentachlorophenol	10
Lead (Total)	500
Zinc (Total)	50,000
Copper (Total)	1300

3. **Table 1 Action Level Exceedance.** When stormwater concentrations exceed a Table 1 Pollutant action level, you must respond as described below:
   a. **Table 1 Individual Sample Exceedance.** Because you have chosen to monitor enough injection system sampling points each year to represent your entire system, including stratification based on vehicle trips, individual exceedances may only reflect localized conditions and may not necessarily indicate a system-wide concern. You must take correction action with respect to the UIC that exceeded the action level as described in Schedule A, condition 4.
   b. **Table 1 Annual Geometric Mean Exceedance.** Because you have chosen to monitor enough injection system sampling points each year to represent your entire system, including stratification based on vehicle trips, a geometric mean exceedance may indicate a system-wide risk to groundwater. You must take corrective action in accordance with Schedule A, condition 4 to ensure system-wide protection of groundwater. You must address all UICs represented by the exceedance.

4. **If discharges from one or more UICs endanger health or the environment, you must:**
   a. Inform us consistent with Schedule F, condition 4(f), and
   b. Take corrective action to eliminate any endangerment of health or the environment. You must complete all corrective actions as soon as practicable, with DEQ approval of work scope and schedule. You must submit updates regarding progress to us at least annually, and you may include them in annual reports required under Schedule B, condition 4.

5. **Corrective Action.** Corrective action always includes actions 4(a) and 4(b) above. It also includes additional actions 4 (c) through 4(g) as required to protect groundwater or to demonstrate that it is already protected:
   c. Attempt to identify the source(s) of an exceedance of Table 1 action levels;
   d. When source identification efforts are complete, determine the set of UICs that require corrective action, based on the identified source(s) or other factors;
   e. Assess whether best management practices need adjustment to eliminate or reduce influent concentrations and make appropriate, practicable changes;
   f. Resample the discharge to UICs that had exceedances of Table 1 action levels to allow for calculation of a geometric mean that verifies or invalidates the original influent concentration;
   g. Demonstrate that groundwater is protected through modeling or other approved approach;
   h. Retrofit the affected UIC(s) so that groundwater is protected;
   i. Decommission the UIC.

6. **Site Control Measures and Best Management Practices.** You must implement and maintain site control measures and best management practices to reduce or eliminate pollutants, in accordance with the DEQ-approved Underground Injection Control System Management Plan described in Schedule D, condition 5.

7. **Underground Injection Systems - Horizontal Setbacks.** All injection systems are subject to the following horizontal setback requirements.
   a. **No Further Action.** You do not need to take further action for injection systems that are:
      i. Outside the two-year Time-of-Travel, if one has been determined by the Oregon Health Authority for public water wells, or
      i. More than 500 feet away from a public or private drinking water or irrigation water supply well, if the Oregon Health Authority has not designated a two-year Time-of-Travel.
   b. **Existing Systems within Horizontal Setbacks.** It is not a permit violation for existing injection systems not to meet the horizontal setbacks described above. However, for each existing injection system that does not have the horizontal setbacks described above, you must provide a protectiveness demonstration within one year of discovery. If protectiveness cannot be demonstrated for a UIC, you must complete the following as soon as practicable during the ten-year term of this permit with DEQ approval of a work plan and schedule:
      i. Retrofit or implement a variety of passive, structural, and/or technological controls to reduce or eliminate pollutants to the underground injection system to provide protection; or
      ii. Close the underground injection system.

      You may consider the proposed work to be approved if you have not received a response from DEQ within 30 calendar days of submitting your work plan and schedule.
   c. **New Systems within Horizontal Setbacks.** You may construct and operate new injection systems inside a horizontal setback if you are able to include a groundwater protectiveness demonstration with the new injection system.

SCHEDULE B
MONITORING AND REPORTING CONDITIONS

1. **System-Wide Assessment.** By no later than April 30, 2013, you must complete and submit to us a System-Wide Assessment of injection systems you own or operate. By the end of the fifth year of the permit term, you must update the System-Wide Assessment to reflect any changes that have occurred and submit a revised System-Wide Assessment to us. If no changes have occurred over the previous five years, you may include the fifth year System-Wide Assessment in the annual underground Underground Injection System Report described in Schedule D, condition 5. The System-Wide Assessment must include:
   a. An inventory of all injection systems that receive stormwater or other fluids and their locations by latitude and longitude in decimal degrees using the NAD 83 datum. If a different datum becomes the standard during the permit term, update the underground injection system inventory using the new datum at the five year review;
   b. An estimate of vehicle trips per day for the area(s) drained by the injection systems;
   c. An inventory of all injection systems that discharge directly into groundwater;
   d. An inventory of all injection systems that do not meet the setback distances listed in Schedule A;
   e. An inventory of all injection systems that are prohibited by OAR 340-044-0015(2), which includes injection systems in vehicle maintenance areas, fuel dispensing areas, floor pits, non-vehicle maintenance facilities' floor drains, and fire station bay floor drain. For these prohibited systems, you also must report and take corrective actions as described in Schedule D, conditions 4 and 5;

f. An inventory of all industrial facilities and commercial properties that pose a risk of pollutant discharge to injection systems that you own or operate.

2. **Stormwater Monitoring Plan.** By June 30, 2013 you must prepare and submit to us a Stormwater Monitoring Plan that describes how you will monitor stormwater and other fluid discharges. You may include the Stormwater Monitoring Plan in the Underground Injection Control System Management Plan described in Schedule D. After we approve your Stormwater Monitoring Plan, you must implement it and comply with its requirements. The Stormwater Monitoring Plan must:
   a. Propose a sampling program representative of your injection systems based on the results of the System-Wide Assessment that characterizes the stormwater injected below ground so that you can demonstrate compliance with action levels in Schedule A Table 1. You may prioritize the monitoring based on potential risks to groundwater, considering such factors as vehicular traffic and land use.
   b. Unless otherwise approved by us in writing, the Stormwater Monitoring Plan must include annual sampling of Schedule A, Table 1 constituents.
   c. Include a list of underground injection system sampling locations.

3. **Groundwater Monitoring.** If you cannot meet the action levels established in Schedule A Table 1, or other information indicates that your injection systems may be adversely impacting groundwater quality, we may require you to monitor groundwater or take additional actions in accordance with OAR 340-040-0030. Prior to completing such monitoring, you may apply for a concentration limit variance as provided in OAR 340-040-0030. If we grant a concentration limit variance, the action levels established in Table 1 may be revised, as appropriate.

4. **Annual Reporting Conditions.** The annual reporting period shall be July 1 to June 30 of each year. By December 31 of each year, starting in 2013, you must submit an annual Underground Injection System Report. Unless we approve otherwise, the annual Underground Injection System Report must:
   a. Include the results of your stormwater monitoring conducted in accordance with your Stormwater Monitoring Plan. This must include a spreadsheet of all data from sampled UICs provided in the analytical laboratory reports;
   b. Discuss any Table 1 action level exceedances and actions taken to address the exceedances;
   c. Describe any actions taken to implement the Underground Injection Control System Management Plan required in Schedule D, condition 5, any proposed modifications to the Underground Injection Control System Management Plan, and any additional actions taken to manage your injection systems to ensure groundwater protection;
   d. Describe any actions described in your Underground Injection Control System Management Plan that you were not able to complete and why;
   e. Identify any injection systems that you closed, retrofitted, or installed during the year;
   f. Describe your future (in the next year) plans to install, modify, convert, or close any underground injection system; and
   g. Provide one hard copy and one electronic copy of the annual Underground Injection System Report. The report will include a tabular summary of results and description of any significant findings. You must retain copies of analytical laboratory reports as described in Schedule F condition 3.

5. **Closing an Underground Injection System.** You must provide prior notice of converting or closing any underground injection system you own or operate. Either you may notify us in advance by listing future decommissioning plans in your annual Underground Injection System Report as in Schedule B, condition 4 above, or you may notify us in accordance with OAR 340-044-0040.

SCHEDULE C
SAFE DRINKING WATER ACT COMPLIANCE SCHEDULE

This permit does not require a Safe Drinking Water Act compliance schedule (see 40 CFR 144.53) because you do not own any injection systems known to violate the Safe Drinking Water Act, state or federal underground injection control rules or regulations, or state groundwater quality protection rules.

SCHEDULE D
SPECIAL CONDITIONS

1. **Legal Authority.** You must adopt and maintain, through ordinance or other means, adequate legal authority to implement and enforce the provisions of this permit. At a minimum, the legal authority must enable you to:
   a. Implement the DEQ-approved Stormwater Monitoring Plan and Underground Injection Control System Management Plan required in Schedule B, condition 2 and Schedule D, condition 5;
   b. Prohibit discharge to an underground injection system that may cause a violation of the conditions of this permit from publicly or privately owned properties; and
   c. Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with the conditions of this permit.

2. **Permittee Personnel Responsible for Permit.** You must identify the key personnel positions and contact information responsible for establishing and maintaining compliance with all conditions of the permit. Contact information includes the employee's name, phone number, business section where the employee works, and the employee's area of responsibility for the permit. You must notify us in writing of any changes to the key personnel or areas of responsibility for the permit in the annual Underground Injection System Report required under Schedule B, condition 4.

3. **Reporting and Corrective Actions for Underground Injection Systems Prohibited by OAR 340-044-0015.** Within 24 hours of discovery you must verbally or in writing provide DEQ with any information you have about prohibited underground injection systems. You must submit a written report within five days of discovery and take the following actions unless otherwise approved by DEQ:
   a. To the extent practicable, you must temporarily divert the discharge away from the UIC within five days of discovering the UIC.
   b. You must permanently close the prohibited injection systems as soon as practicable, with DEQ approval of work scope and schedule.

4. **Underground Injection Systems Discovered After the Permit is Issued.** For any underground injection system you discover or identify after the permit is issued, you must:
   a. Submit the necessary information to us, either with the updated System-Wide Assessment or the next annual Underground Injection System Report, whichever is submitted first, so that we may add the underground injection system to our underground injection system database;
   b. Include the underground injection system in the first annual Underground Injection System Report after you discover or identify it; and
   c. Ensure that the newly identified injection system is represented by the current Stormwater Monitoring Plan.

5. **Underground Injection Control System Management Plan.** By June 30, 2013, you must submit an Underground Injection Control System Management Plan to us for approval. The Underground Injection Control System Management Plan must include a description of how the elements listed below will be implemented in order to protect groundwater quality:
   a. Stormwater Monitoring Plan, described in Schedule B, condition 2, including how you will use stormwater monitoring results to ensure compliance with the action levels in Schedule A, Table 1;
   b. Injection system decommissioning;
   c. Employee education and public outreach;
   d. Injection system operation and maintenance;
   e. Protecting injection systems from accidental spills or illicit disposal of wastes or contaminants;
   f. Preventing injection of stormwater from loading docks, refueling areas, areas of hazardous and toxic material storage or handling, materials storage or handling areas, or other discharges that may contain pollutants above levels of concern;
   g. Housekeeping practices to protect groundwater quality;
   h. Facility designs or practices that allow you to block discharge into any underground injection systems in the event of an accident, spill, or emergency fire-fighting activity.

   After we approve the Underground Injection Control System Management Plan or any update of the Plan, you must implement it.

6. **Adaptive Management.** You must follow an adaptive management approach to assess annually, and modify as necessary, any or all existing Underground Injection Control System Management Plan components, and adopt new or revised Underground Injection Control System Management Plan components to ensure the program is efficient and effective. You must at least annually assess the need to further improve groundwater quality and protect groundwater beneficial uses, review of available technologies and practices, review monitoring data and analyses as required in Schedule B, and evaluate resources available to implement the program. You must evaluate trends in emerging pollutant types and concentrations in the fifth year after permit issuance and for the permit renewal application. Your evaluation must address the implications of any significant findings for protection of beneficial uses and for the application of best management practices.

7. **Rule Authorization.** This permit covers all UICs owned or operated by the City of Eugene, including those that have been previously rule authorized.

8. **Permit Shield.** Compliance with this permit constitutes compliance, for purposes of enforcement, with the UIC provisions of the federal Safe Drinking Water Act, implementing federal regulations, and OAR chapter 340, divisions 040 and 044. This provision, however, does not preclude modification, revocation and reissuance, or termination of this permit as authorized by applicable federal and state law.

SCHEDULE E
PRETREATMENT CONDITIONS

Not applicable to this permit

SCHEDULE F
GENERAL CONDITIONS

1. **Standard Conditions.**
   a. **Duty to Comply.** You must comply with all conditions of this permit. Any permit noncompliance is grounds for enforcement action. It is also grounds for permit termination, revocation and reissuance, or

modification; or for denial of a permit renewal application; except that you need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34.

b. **Penalties for Violations of Permit Conditions.** ORS 468.140 allows us to impose civil penalties up to $25,000 per day for each violation of a term, condition, or requirement of a permit. ORS 468.943 creates the criminal offense of unlawful water pollution in the second degree, for the criminally negligent violation of ORS chapter 468B or any rule, standard, license, permit or order adopted or issued under ORS chapter 468B. In some situations, violations of a term, condition or requirement of the permit may also be a criminal offense, specifically unlawful water pollution in the first degree (a felony) or unlawful water pollution in the second degree (a misdemeanor). [ORS 468.943 and ORS 468.946].

c. **Duty to Mitigate.** You must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit. You must take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment. In addition, you must correct any adverse impact on the environment or human health or safety resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

d. **Duty to Reapply.** If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain a new permit. In accordance with OAR 340-045-0040(1), you must submit the application at least 60 days before the expiration date of this permit. We may grant you permission to submit an application less than 60 days in advance of the permit expiration date. We will not grant permission for a renewal application that you submit later than the expiration date of the existing permit.

e. **Permit Actions.**
   i. We may modify, revoke and reissue, or terminate this permit for cause including, but not limited to, the following:
      (1) Violation. The violation of any term, condition, or requirement of this permit, or a related state rule or statute, or a federal regulation related to underground injection control for injection wells;
      (2) Misrepresentation. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or
      (3) Change of condition. A change of any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
   ii. You may request a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, but this request does not stay the effectiveness of any permit condition.

f. **Property Rights.** The issuance of this permit does not convey any property rights of any sort or any exclusive privileges.

g. **Permit Reference.** All rules and statutes referred to in this permit are those in effect on the date we issue this permit, or the date we modify the permit to incorporate new provisions as provided in OAR 340-045-0055, whichever occurs later.

h. **Penalties for False Information.** Under ORS 486.953, any person who supplies false information to us commits a Class C felony. Under OAR 340-012-0053(1)(b), providing us with false information is a Class 1 civil violation. Providing us with false information includes the following:
   i. Falsifying, tampering with, or knowingly rendering inaccurate, any monitoring device or method required to be maintained under this permit;
   ii. Making any false material statement, representation or certification knowing it to be false, in any application, notice, plan, record, report or other document required by any provision of ORS chapter 465, 466, 468, 468A or 468B or any rule adopted pursuant to ORS chapter 465, 466, 468, 468A or 468B;

iii. Omitting any material or required information, knowing it to be required, from any document described in paragraph (a) of this subsection; or
iv. Altering, concealing or failing to file or maintain any document described in paragraph (a) of this subsection in knowing violation of any provision of ORS chapter 465, 466, 468, 468A or 468B or any rule adopted pursuant to ORS chapter 465, 466, 468, 468A or 468B.

i. **Duty to Provide Information.** You must furnish to us, within a time specified, any information that we may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. You must also furnish to us upon request, copies of records that this permit requires you to keep.
j. **Need to Halt or Reduce Activity not a Defense.** It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
k. **Permit Modifications.** You may request a permit modification or we can initiate it. Any modification to the permit must be in accordance with the provisions of OAR 340-045-0055 and 40 CFR 144.41, as applicable.

2. **Operation and Maintenance.**
   a. **Proper Operation and Maintenance.** You must at all times properly operate and maintain all facilities and systems of treatment and control (and related equipment) that you install or use to comply with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of a back-up or auxiliary facilities or similar systems only when necessary to comply with the conditions of the permit.
   b. **Removed Substances.** You must dispose of or otherwise manage any soil, gravel, sludge, liquids, or other materials removed from or adjacent to a UIC in accordance with 40 CFR 144.82(b).

3. **Monitoring and Records.** You must comply with monitoring requirements of 40 CFR 144.51(j) and this condition:
   a. Samples and measurements taken for monitoring must be representative of the monitored activity.
   b. **Records Contents.** Records of monitoring information you must retain include:
      i. The date, exact place, time and methods of sampling or measurements;
      ii. The name(s) of the individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The name(s) of the individual(s) who performed the analyses;
      v. The analytical techniques or methods used;
      vi. The results of such analyses;
      vii. The nature and composition of all injected fluids until three years after completion of any plugging and decommissioning procedures; and
      viii. We may require the owner or operator to deliver the records to us at the conclusion of the retention period.
   c. **Inspection and Entry.** You must allow us, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
      i. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
      ii. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
      iii. Sample or monitor at reasonable times, for the purposes of ensuring permit compliance or as otherwise authorized by the Safe Drinking Water Act or state law, any substances or parameters at any location.

d. **Retention of Records.** You must retain records of all monitoring and maintenance information, including all field notes, calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, all analyses of the data generated, all reports required by this permit, and records of all data used to complete the application for this permit. You must keep them for a period of at least 10 years from the date of the sample, measurement, report, or application. You must make the records available to us upon request.

4. **Reporting and Signatory Requirements.** You must comply with the reporting requirements of 40 CFR 144.51(j) and this condition:
   a. **Planned changes.** You must give us notice as soon as possible of any planned physical alterations or additions to the permitted facility as described in Schedule B, condition 4.
   b. **Anticipated noncompliance.** You must give us advance notice of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.
   c. **Anticipated Violations.** You must give us advance notice of any planned changes in the permitted facilities or activities that may result in violations of permit requirements.
   d. **Transfers** This permit is not transferrable to any person except after giving us notice and meeting the conditions of OAR 340-045-0045. We may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the federal Safe Drinking Water Act (see 40 CFR 144.38; in some cases, modification or revocation and reissuance is mandatory).
   e. **Compliance Schedule.** You must make compliance reports on all interim and final requirements contained in any compliance or implementation schedule included in this permit. The reports must explain the cause of any noncompliance, if known, any remedial actions taken, and the probability of meeting the next scheduled requirements.
   f. **Twenty-Four-Hour and Five-Day Reporting.** Unless a different compliance schedule and reporting requirements are otherwise noted in this permit, you must report any non-compliance that endangers health or the environment in accordance with 40 CFR 144.51(l)(6). You must provide any information of non-compliance that endangers health or the environment orally within 24 hours from the time you become aware of the circumstances. You must submit a written report within 5 days of the time you become aware of the circumstances. The written report must contain:
      i. A description of the violation and its cause, if known;
      ii. The period of violation, if known;
      iii. The estimated time the violation is expected to continue if it has not been corrected; and
      iv. Steps taken or planned to reduce, eliminate, and prevent recurrence of the violation.
   g. **Other Compliance.** In accordance with 40 CFR 144.51(l)(7), you must report all other instances of non-compliance not reported in Schedule F, conditions 4(e) and 4(f) at the time the annual reports are submitted. The reports must contain the information listed in Schedule F, condition 4(f).
   h. **Other Violations.** You must report all permit violations that occurred during a permit-established reporting period in the annual Underground Injection Control System Management Report for that period. The reports must contain the information listed in Schedule F, condition 4(f).
   i. **Signatory Requirements.** You must sign and certify all applications, reports or information submitted to us as provided in 40 CFR 144.32.

APPENDIX B

UIC System Management Plan, including updated UIC Stormwater Monitoring Plan (2015)

City of Eugene
Underground Injection Control System Management Plan
June 2013

Table of Contents

Appendices

1. Introduction

Overview

The City of Eugene has prepared this Underground Injection Control System Management Plan (UIC SMP) in compliance with the requirements of the Water Pollution Control Facility Underground Injection Control (UIC) Permit Number 103047 (UIC permit) issued January 2013. This UIC SMP describes the overall program and the activities the City will implement throughout the permit term (through December 31, 2022) to protect groundwater quality and meet permit requirements.

Regulatory Background

In 1974, Congress enacted UIC rules under the Safe Drinking Water Act. These rules are administered by the U.S. Environmental Protection Agency (EPA) under 40 CFR 144-148. The program was delegated to the Oregon Department of Environmental Quality (DEQ) from EPA in 1984. The federal UIC rules were modified in 1999. In response to the new federal rules, delegated states were required to update their state UIC rules. Oregon Administrative Rules (OARs) 340-044 were revised in September 2001 and include special requirements for municipalities with 50 more UICs.

As a result of the updated OARs and in light of the City's ownership of more than 50 public UICs, Eugene prepared a WPCF permit application and accompanying inventory and system assessment for its UICs. A system-wide assessment was documented in submittal packets to DEQ dated December 19, 2001, January 18, 2002, and June 28, 2002. The City's Water Pollution Control Facility (WPCF) UIC permit application was submitted to DEQ on June 28, 2002. Updates related to newly discovered or newly constructed UICs were submitted to DEQ in submittal packets dated November 6, 2002, November 12, 2004 and July 29, 2010.

Eugene's UIC permit was issued in January 2013 and authorizes the discharge of stormwater and certain incidental non-stormwater fluids to City owned or operated UICs at multiple locations within city limits. The permit includes controls and limitation conditions, monitoring and reporting conditions, special conditions including the requirement to submit this UIC System Management Plan, and general conditions. The permit is scheduled to expire on December 31, 2022.

In addition to the UIC permit, the City has held a Phase I National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Separate Storm Sewer permit (MS4 permit) since 1994. MS4 permits in Oregon are administered by DEQ on behalf of EPA under the federal Clean Water Act. The MS4 permit, most recently re-issued in December 2010, authorizes the discharge of stormwater from the municipal stormwater system to surface water receiving bodies. Controls and limitations include the requirement to implement a Stormwater Management Plan (SWMP). Eugene's SWMP, most recently updated in December 2012 and included in this report as Appendix A, includes a set of 24 stormwater management best management practices (BMPs), many of which are directly applicable to the UIC permit.

Permit Requirements

Schedule D.5 of the City's UIC permit requires submittal of a UIC SMP for DEQ approval. The SMP must include a description of how each required program element will be implemented in order to protect

groundwater quality. Required SMP elements are listed in Table 1-1, with the corresponding section in this report that describes how the requirement is met. Once approved by DEQ, the SMP must be implemented.

Table 1-1. Schedule D.5 – Required UIC SMP Elements

Required UIC SMP Element	Location in SMP
a. Stormwater Monitoring Plan, described in Schedule B, condition 2, including how you will use stormwater monitoring results to ensure compliance with the action levels in Schedule A, Table 1;	Section 5 and Appendix B
b. Injection system decommissioning;	Section 4.f and Section 6
c. Employee education and public outreach;	Section 4.a
d. Injection system operation and maintenance;	Section 4.b
e. Protecting injection systems from accidental spills or illicit disposal of wastes or contaminants;	Section 4.c
f. Preventing injection of stormwater from loading docks, refueling areas, areas of hazardous and toxic material storage or handling, materials storage or handling areas, or other discharges that may contain pollutants above levels of concern;	Not applicable to Eugene's UICs
g. Housekeeping practices to protect groundwater quality; and	Section 4.b
h. Facility designs or practices that allow you to block discharge into any underground injection system in the event of an accident, spill, or emergency fire-fighting activity.	Section 4.c

Document Organization

This UIC System Management Plan includes six sections and related appendices: 1) this Introduction, 2) Program Description and Organization, 3) Adaptive Management 4) UIC System Management, 5) System Monitoring, and 6) UIC Decommissioning.

2. Program Description and Organization

Program Description

Eugene's publicly owned and managed stormwater system is comprised of over 570 miles of stormwater pipes and waterways, over 14,700 catch basins and curb inlets, approximately 8,600 manholes, 175 water quality facilities, and 163 public UICs (commonly referred to locally as drywells). The entire municipal system is managed in accordance with adopted policy (Comprehensive Stormwater Management Plan) and the City's MS4 permit and SWMP.

Regardless of whether stormwater ultimately discharges to surface water or to a UIC, the full set of SWMP BMPs are employed, including:

- Public outreach and education,
- Source controls and pollution prevention,
- Construction site management,
- New development standards,
- Operations and maintenance,
- Capital projects, and
- Spill response.

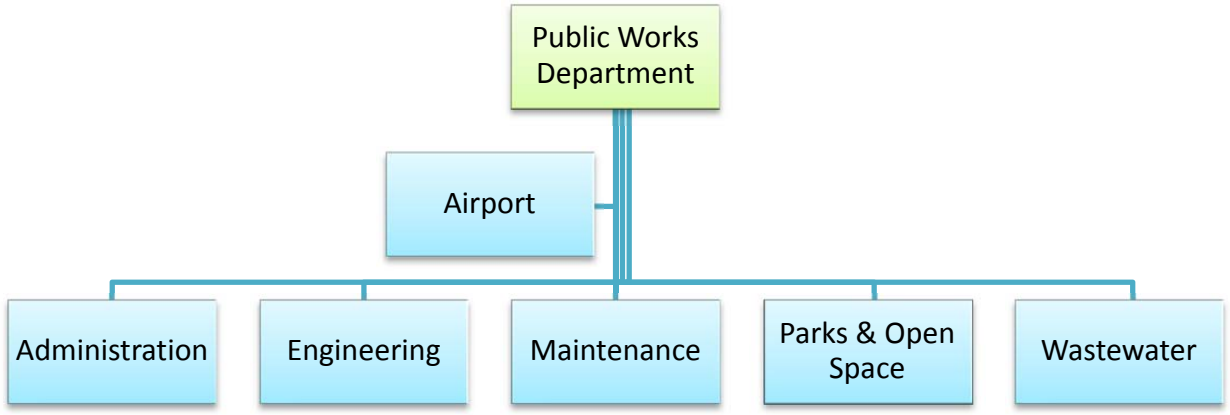
UICs are an important component of the overall stormwater system, of equal importance relative to other system components such as pipes and waterways. From the regulatory perspective, the Clean Water Act and associated MS4 permit and SWMP govern the discharge of stormwater from the municipal stormwater system to state waterbodies and the relatively new WPCF UIC permit regulates the discharge of stormwater to UICs. From a practical perspective, the entire stormwater system including UICs is managed in a manner that prevents, reduces, and mitigates for stormwater-related pollution.

As previously mentioned, the SWMP details how the City ensures adequate stormwater protection regardless of the discharge location. With the issuance of the UIC permit, the stormwater program has been expanded in two significant areas: 1) capital improvements related to drywell decommissioning and 2) monitoring to include representative UIC sampling and a broader set of pollutant parameters.

Program Organization

The Eugene Public Works Department (Figure 2-1), with the exception of the Airport Division, has overall responsibility for implementing the MS4 permit and SWMP within Eugene city limits, and will be responsible for carrying out the UIC permit activities as well.

Figure 2-1. Public Works Department Organization



The stormwater program elements are managed by five divisions in the department: Administration, Engineering, Maintenance, Parks & Open Space, and Wastewater, with two elements managed by the Planning & Development Department. Table 2-1 provides a summary of the general areas of responsibilities within the stormwater program.

Table 2-1. General Areas of Responsibility within the Stormwater Program

Department/Division	Areas of Responsibility
Public Works Administration Division	Stormwater outreach and education, graphics Financial management
Public Works Engineering Division	Standards for new development Erosion control and construction site management Capital improvement projects, including UIC projects Storm system mapping & data management Stormwater planning NPDES permit management
Public Works Maintenance Division	Illicit connections/Illegal discharges Spill response Street sweeping Leaf pick-up Constructed system maintenance Regulation of private underground facilities
Public Works Parks & Open Space Division	Open channel and vegetated facility maintenance Vegetation management Litter pick up Volunteer programs Regulation of private vegetated facilities Bacteria pilot study coordination
Public Works Wastewater Division	MS4 and UIC monitoring plan implementation Water quality sampling and data analysis Industrial stormwater program
Planning and Development Department	Recycling and waste prevention education Yard debris recovery program

Coordination of the various activities occurs through routine staff communication, and via several staff teams as shown in Table 2-2.

Table 2-2. Stormwater Program Policy, Management and Coordination Teams

Stormwater Program Team	Team Purpose
Stormwater Policy Team	Provides policy direction for the Stormwater Program.
Stormwater Management Team	Provides overall management for Stormwater Program. Oversees development of new policy for approval by Policy Team. Implements Policy Team direction.
UIC Core Team	Task specific team to implement UIC program and recommend policy for approval by the Policy Team. Once UIC program is on-going, management will be conducted by the Stormwater Management Team.
Stormwater Operations Team	Shares information for on-going program coordination. Resource pool of key staff for specific tasks.
Stormwater Enforcement Coordination Team	Coordinates on code compliance incidents. Shares information on enforcement actions.
Stormwater Penalty Review Team	Reviews administrative civil penalties and makes determination. Provides inter-divisional coordination.

Relationship to Comprehensive Stormwater Management Plan (CSWMP)

In 1993, the Eugene City Council adopted as a refinement to the Eugene-Springfield Metro Plan, the Comprehensive Stormwater Management Plan (CSWMP) which provides the policy framework for the City's stormwater program. The impetus for adopting CSWMP was in part the anticipated federal requirements of the NPDES permit, but it was also necessitated by concerns over open waterway management and the discovery, in the early 1990's, of an extensive concentration of wetlands in west Eugene. A major goal of adopting CSWMP was to address a variety of stormwater issues within a comprehensive management framework -- to manage each of the program areas so that they are coordinated and consistent, meet the requirements of federal law, meet the needs of the community, and meet multiple stormwater-related objectives. CSWMP policies cover 4 general areas:

- **Flood control** efforts are to be modified to maintain current levels of service while improving water quality and protecting natural resources.
- **Water quality** efforts are to be employed to reduce the discharge of pollutants to the maximum extent practicable.

- **Natural resources** that are related to the stormwater drainage and flood control system, such as conveyance corridors and adjoining wetland and riparian zones, are to be managed to benefit water quality and wildlife habitat.
- **Operations and maintenance** practices are to be modified to meet the objectives of flood control, water quality improvement, and related natural resources protection.

CSWMP incorporates the City's original (1994) MS4 permit SWMP BMPs, as well as other implementation measures to achieve policies, goals, and objectives. Many of the MS4-related BMPs overlap with other CSWMP objectives such as the use of native plants along water corridors for bio-filtration purposes and for wildlife habitat, and the restoration of local waterways for increased capacity, water quality improvement, and habitat enhancement. Several implementation measures identified in CSWMP relate to ensuring that stormwater policies are consistent with groundwater regulations and policies and that the potential impact to groundwater resources of proposed stormwater control measures is assessed prior to implementation.

Relationship to Other Local Jurisdictions / Partnerships in Program Implementation

Phase II of the NPDES MS4 permit program, implemented following EPA rulemaking in 1999, expanded the program to include smaller communities located in United States census-defined Urbanized Areas, including Eugene's metro area partners: City of Springfield and Lane County. Phase II rules require communities to develop, implement and enforce stormwater management programs that address six minimum measures:

- Public education and outreach
- Public participation/involvement
- Unlawful discharge detention and elimination
- Construction site runoff control
- Post-construction site runoff control
- Pollution prevention/good housekeeping

MS4 permits for the City of Springfield and Lane County were first issued in January 2007. To achieve operational efficiencies and for the benefit of its customers, Lane County and the City of Eugene entered into an intergovernmental agreement in April 2004 to collaborate on certain stormwater program elements within the jurisdictional area outside of the Eugene city limits and within the Eugene urban growth boundary. This primarily means the River Road – Santa Clara stormwater basin area. Program elements covered under the 2004 Stormwater IGA included stormwater planning in River Road – Santa Clara, stormwater education, erosion prevention and construction site management, and illicit discharge detection and elimination. The Stormwater IGA was updated most recently in November 2012 and now also includes illicit discharge detection and elimination, administration of post-construction stormwater development standards, and coordination on a groundwater protectiveness study for Eugene and Lane County's UICs. Phase II MS4 permits expired on December 31, 2011 and have been administratively extended pending DEQ action on permit renewals.

On an on-going basis, formally through the Stormwater IGA with Lane County and informally through participation in multi-agency efforts such as the Pollution Prevention Coalition, the cities of Eugene and Springfield and Lane County often collaborate on stormwater education activities such as defining topics for the City of Eugene's Stormwater Connections newsletter, and topic-specific outreach and education efforts such as pressure washing brochures. The City actively participates in collaborative stormwater-related efforts with agencies across the state, including under the auspices of the Oregon Association of Clean Water Agencies (ACWA).

3. Adaptive Management

The City of Eugene follows an adaptive management approach to assess and, when necessary, modify stormwater program elements to achieve reductions in stormwater pollutants. This includes consideration of available technologies and practices; review and analysis of monitoring data generated by the implementation of the monitoring plan; review of goals and tracking measures; and evaluation of City resources available to implement the technologies and practices.

4. UIC System Management

UICs are a part of the City's stormwater system and are equally important relative to the other components of the system that discharge directly to surface water. The UIC system management plan includes a description of the current stormwater program, an explanation of the relevance of each applicable MS4 SWMP BMP category to the UIC permit, and the areas where the program has been expanded in response to the new UIC permit.

MS4 SWMP BMP Categories

Eugene's MS4 SWMP includes 24 BMPs designed to reduce the discharge of stormwater pollutants to the maximum extent practicable. Each BMP is given an ID (for example, A1) for tracking and reporting purposes; the ID is based on the division within the Public Works Department or Planning & Development Department that has lead responsibility, as follows:

A = Administration Division of Public Works
B = Building Division of Planning and Development
E = Engineering Division of Public Works
M = Maintenance Division of Public Works
P = Parks and Open Space Division of Public Works
W = Wastewater Division of Public Works

The 24 BMPs fall into eight general categories:

- Public Education
- Operations and Maintenance;
- Illicit Discharge Controls;
- Waste Management;

- Construction and Design New Development;
- Planning, Capital Improvements; and Data Management;
- Industrial Controls; and
- Permit Management.

The grouping of BMPs, a general description of each category, and the relevance of the BMPs to the UIC permit, are described below. Table 2-3 includes the full list of BMPs by ID, title and category.

4a. Public Education

The purpose of public education BMPs is to inform the public, the commercial/industrial sector, and in-house personnel about the sources and causes of stormwater pollution, its effect on the local receiving waters, and to encourage active involvement (e.g. behavioral changes, volunteerism, etc.) in the effort to reduce pollution. The following BMPs represent the public education elements of the SWMP:

A1 Stormwater Education
P1 Educational Volunteer Program

Relevance to UIC permit: The stormwater education program provides information and education on a wide range of stormwater related topics through a variety of media and approaches. The program addresses the entire range of stormwater quality issues including pollution prevention, source control, construction site management, development standards, system operations and maintenance, and spill response. The issues of stormwater quality are relevant to the stormwater system whether it drains to pipes, waterways, or UICs. The education program provides information about the stormwater system itself, including UIC-specific information, in its outreach materials such as the bi-annual newsletter Stormwater Connections, fact sheets, and City internet site.

4b. Operations and Maintenance

The purpose of operations and maintenance BMPs is to maintain the publicly managed stormwater system (e.g. pipes, culverts, open waterways, water quality facilities), balancing flood control, drainage services, water quality and natural resource protection needs, and to adaptively manage for continuous improvement of current operations and maintenance practices. Operations and maintenance BMPs are also focused on planning and performing other City services (e.g. landscape maintenance or road repair projects) in a manner that minimizes the potential for stormwater pollution from these activities. The following BMPs represent the operations and maintenance element of the SWMP:

M3 Street Sweeping Program and Leaf Pick-up
M4 Prevent Leaks and Spills from Municipal Vehicles and Equipment
M5 Public Stormwater System Cleaning Program – Piped System
M8 Winter Road Sanding and De-Icing Program
P3 Tree Planting and Information Programs
P4 Public Stormwater System Maintenance – Developed Parks and Rights-of-Way

P5 Public Stormwater System Maintenance – Open Waterways

Relevance to UIC permit: The stormwater operation and maintenance program includes regular street sweeping, leaf pick-up, and system cleaning including curb inlets, catch basins, manholes, water quality facilities, and UICs. These standard practices aimed at preventing flooding and protecting water quality are conducted regardless of whether the system ultimately drains to pipes, waterways, or UICs. In addition to system operations and maintenance, in the interest of good housekeeping, municipal vehicles and equipment are regularly maintained and monitored for any leaks or spills.

4c. Illicit Discharge Controls

The purpose of illicit discharge control BMPs is to become aware of, investigate, detect, mitigate, and enforce the elimination of illicit (non-stormwater) discharges and illegal dumping to the stormwater system. The following BMPs represent the illicit discharge control element of the SWMP:

M1 Management of Illicit Discharges to the Municipal Stormwater System
M2 Spill Response
M7 Systematic Stormwater Field Screening and Investigation
P7 Litter and Illegal Dumping Control

Relevance to UIC permit: The illicit discharge control program ensures that the stormwater system, including pipes, waterways, water quality facilities and UICs are protected from spills and unauthorized non-stormwater discharges. Illicit discharge control and spill response in the River Road-Santa Clara area is managed via an Intergovernmental Agreement (Stormwater IGA) with Lane County. The City provides response services in partnership with Lane County to ensure the problems are addressed in a timely manner by the agency best positioned to respond to and address the situation.

4d. Waste Management

The purpose of the waste management BMPs is to educate the public, regulate waste management services, and to ensure that proper facilities are available in order to minimize the potential of negative stormwater impacts from solid waste collection, improper disposal of toxic materials, and illegal dumping of garbage and debris. The following BMPs represent the waste management element of the SWMP:

B1 Household Hazardous Waste Disposal
B2 Solid Waste Management

Relevance to UIC permit: The waste management program is an element of public education and good housekeeping in that it provides information and mechanisms for proper disposal of wastes including liquid wastes that may otherwise be discharged to the stormwater system including to pipes, waterways, water quality facilities, and UICs.

4e. Construction and New Development

The purpose of the construction and new development BMPs is to ensure that appropriate control measures are considered, implemented, and maintained during and after the planning, design, and construction phases for new public and private development and significant re-development projects. The following BMPs represent the new construction and new development related elements of the SWMP:

E2 Erosion Prevention and Construction Site Management Program
E4 Stormwater Development Standards
P6 Compliance Program for Maintenance of Privately Owned Vegetated Stormwater Facilities
M6 Regulation of Inspection, Maintenance and Reporting of Private Underground Stormwater Structures

Relevance to UIC permit: The construction and new development programs prevent and minimize water quality impacts to the stormwater system, including UICs, from construction-related activities and from new development and re-development. Eugene acts as an agent on behalf of DEQ in administering construction stormwater (1200-C) permits and screens applications for permit applicability, issues permits, conducts plan review, inspections, and enforcement activities in coordination with DEQ under a Memorandum of Agreement.

4f. Planning, Capital Improvements and Data Management

The purpose of planning, capital improvements and data management is to develop and implement comprehensive stormwater basin plans, evaluate potential sources of specific pollutants and related BMPs to address them, and maintain up to date data on the stormwater system. The following BMPs represent the planning, capital improvements and data management elements of the SWMP:

E1 Stormwater Capital Improvement Projects
E3 Stormwater System Mapping and Data Management
P2 Bacteria Pilot Study

Relevance to UIC permit: The planning, capital improvements and data management programs include long term planning and project identification for system needs including as they relate to UICs, and system data tracking and documentation to keep the City's infrastructure and GIS databases up to date.

Eugene's stormwater basin master plans were updated in 2002 (for six of the City's seven stormwater basins: Amazon Creek, Bethel Danebo, Laurel Hill, Willakenzie, Willamette River, and Willow Creek) and 2010 (for the River Road-Santa Clara basin). The River Road-Santa Clara Basin Plan was completed in partnership with Lane County, due to the mixed jurisdictional nature of the area. It includes a list of capital projects, many of which are to decommission the public drywells in

the area. The River Road – Santa Clara Basin Plan was adopted in January 2013 by the City and Lane County.

The City's stormwater capital improvement program includes a multiple-objective set of projects, including but not limited to UIC-related projects to be implemented over a 20+ year timeframe. In anticipation of the UIC permit and following completion of the River Road – Santa Clara Basin Plan, decommissioning projects for all public UICs were identified and incorporated into the capital projects list. Forty individual UIC decommissioning projects were identified city-wide to address Eugene's 163 public UICs. UIC projects were initially prioritized based upon previous draft UIC permit templates which reflected vertical separation as a priority criterion. In July 2012, Eugene notified DEQ of plans to close 21 public UICs and by fall 2012, decommissioning of these UICs was completed. A final closure notification to DEQ will be included with the City's first annual UIC System Report in December 2013. Since the issuance of the City's UIC permit in January 2013 and the completion of the groundwater protectiveness study in March 2013, Eugene's remaining 142 UICs and related projects will be re-prioritized accordingly (see Section 6 for more information about evaluation and prioritization criteria). UIC projects will be allocated a specific amount of budget each year.

The City's infrastructure database, Cassworks, and its GIS interface, Geodart, are continually updated to include more complete and accurate data about Eugene's stormwater system including UICs. UIC attribute data has been refined as a part of the System-Wide Assessment update required by the UIC permit and submitted under separate cover.

4g. Industrial Controls

The purpose of industrial controls is to provide oversight of stormwater discharges from industrial facilities, including screening, inspections, technical assistance, and response to spills at permitted facilities. The following BMP represents the industrial element of the SWMP:

W1 Industrial Stormwater Management Program

Relevance to UIC permit: The industrial stormwater program protects the stormwater system from discharges to the system from industrial land uses. Eugene acts as an agent on behalf of DEQ in administering industrial stormwater (1200-Z) permits and screens new industries for permit applicability, conducts permit, plan review and inspections, and conducts enforcement activities in coordination with DEQ under a Memorandum of Agreement. There are no known public UICs in catchment areas of industrial land use.

4h. Permit Management

The purpose of permit management is to ensure effective permit management, coordination, and reporting. The following BMP represents the administrative element of the SWMP:

E5 Permit Management and Reporting

Relevance to UIC permit: As indicated in this UIC SMP, many of the MS4 SWMP BMPs and stormwater monitoring analysis and reporting are directly applicable to the UIC permit.

Table 2-3. April 2011 SWMP Best Management Practices

BMP ID	BMP Title	BMP Category
A1	Stormwater Education	Public Education
E1	Stormwater Capital Improvement Projects	Planning, Capital Improvements, Data Mgt.
E2	Erosion Prevention & Construction Site Management Program	Construction and New Development
E3	Stormwater System Mapping and Data Management	Planning, Capital Improvements, Data Mgt.
E4	Stormwater Development Standards	Construction and New Development
E5	Permit Management & Reporting	Permit Management
M1	Management of Illicit Discharges to the Municipal Stormwater System	Illicit Discharge Controls
M2	Spill Response	Illicit Discharge Controls
M3	Street Sweeping Program and Leaf Pick-up	Operations & Maintenance
M4	Prevent Leaks and Spills from Municipal Vehicles and Equipment	Operations & Maintenance
M5	Public Stormwater System Cleaning Program – Piped System	Operations & Maintenance
M6	Regulation of Inspection, Maintenance and Reporting of Private Underground Stormwater Structures	Construction and New Development
M7	Systematic Stormwater Field Screening and Investigation	Illicit Discharge Controls
M8	Winter Road Sanding and De-Icing Program	Operations & Maintenance
P1	Educational Volunteer Program	Public Education
P2	Bacteria Pilot Study	Planning, Capital Improvements, Data Mgt.
P3	Tree Planting and Information Programs	Operations & Maintenance
P4	Public Stormwater System Maintenance – Developed Parks and Rights-of-Way	Operations & Maintenance

BMP ID	BMP Title	BMP Category
P5	Public Stormwater System Maintenance – Open Waterways	Operations & Maintenance
P6	Compliance Program for Maintenance of Privately Owned Vegetated Stormwater Facilities	Construction and New Development
P7	Litter and Illegal Dumping Control	Illicit Discharge Controls
B1	Household Hazardous Waste Disposal	Waste Management
B2	Solid Waste Management	Waste Management
W1	Industrial Stormwater Management Program	Industrial Facilities

5. UIC System Monitoring

Schedule B.2 of the City's UIC permit requires submittal of a Stormwater Monitoring Plan that describes how the City will monitor stormwater discharges, including a sampling program that is representative of the City's UICs. The majority of City owned UICs are located within low density residential land use areas in three geographic areas of Eugene: River Road, Santa Clara, and Willakenzie. As described further in Section 6, UICs located within commercial areas and areas of relatively higher traffic volumes will be assigned a higher priority for decommissioning. Therefore, UIC stormwater sampling locations were selected to represent the most prevalent land use (low-density residential and associated rights-of-way) and the three main areas of City in which they are located. For more specific information on the monitoring strategy and sites selected, see the City of Eugene's proposed UIC Stormwater Monitoring Plan in Appendix B of this document.

6. UIC Decommissioning

As described in Section 4.f, the City's Capital Improvement Program includes a line item for UIC decommissioning projects. It is the intention of the City to ultimately decommission most or all of its public UICs, prioritizing highest for decommissioning those that have the greatest potential to impact groundwater quality. In accordance with Schedule B.1, the City completed a System-Wide Assessment which has been submitted under separate cover to DEQ. The system-wide assessment is an updated inventory of the spatial and physical characteristics of the City's UICs and identifies UICs that pose the highest relative risk to groundwater quality. Included in the System-Wide Assessment is a Groundwater Protectiveness Demonstration report for Eugene's UICs. The GWPD identifies UICs that have the greatest potential to impact groundwater quality due to vertical proximity to seasonal high groundwater and horizontal proximity to water supply wells. Other characteristics will be factored into the prioritization of drywell decommissioning projects including catchment area land use (e.g. commercial areas are prioritized higher than residential areas), catchment area traffic volumes (>1,000 ADT is prioritized higher than <1,000 ADT), history of spills, flooding and drainage issues, and maintenance problems.

In accordance with Schedule B.5., each year the City will include in its UIC System Report prior notice to DEQ of UICs that are proposed for decommissioning in the upcoming year and notice of those UICs that have been decommissioned over the previous reporting year.

CITY OF EUGENE, OREGON
STORMWATER MANAGEMENT PLAN

APRIL 2011

Updated DECEMBER 2012

CITY OF EUGENE
STORMWATER
MANAGEMENT PROGRAM

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TABLES

City of Eugene UIC Stormwater Monitoring Plan

For

Water Pollution Control Facilities Permit
For Class V Stormwater Underground Injection Control Systems
Permit 103047

June 2013

(Updated September 2015)

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I. Overview

The City of Eugene has developed this Underground Injection Control (UIC) Monitoring Plan in accordance with the Oregon Department of Environmental Quality (DEQ) Water Pollution Control Facility (WPCF) Underground Injection Control (UIC) Permit No. 103047 issued to the City on January 25, 2013. This Monitoring Plan describes environmental monitoring elements that will be used to assist the City with ongoing efforts to characterize stormwater pollutant discharges within representative UIC drainage areas, determine potential pollutant sources, assess the effectiveness of the City's best management practices applicable to UICs and whether these are protective of groundwater, identify instances where corrective action may be needed to protect groundwater, and assist with the adaptive management of the stormwater program.

Monitoring conducted will meet or exceed the requirements established in the City's UIC permit. Such requirements include:

- Schedule A.2 Table 1 – Action Levels for Pollutants
- Schedule A.3-5 – Action Level Exceedance and Corrective Action
- Schedule B.2 – Stormwater Monitoring Plan
- Schedule B.3 – Groundwater Monitoring (as required, see permit)

II. Monitoring Program

The UIC stormwater monitoring described in this plan will be managed by the City of Eugene staff in the Public Works Department. Program managers in the Engineering, Maintenance, Parks & Open Space, and Wastewater Divisions will be responsible for ensuring all plan elements are developed, implemented, and managed as described.

Sampling will be initiated on July 1, 2013 and will be conducted during the following Permit Years (and corresponding sampling timeframes):

- Permit Year 2 (July 1, 2013 through June 30, 2014)
- Permit Year 3 (July 1, 2014 through June 30, 2015)
- Permit Year 5 (July 1, 2016 through June 30, 2017)
- Permit Year 9 (July 1, 2020 through June 30, 2021)

III. Representative UIC Sampling

The majority of City owned UICs are located within low density residential land use zones in three distinct geographic areas within the City: River Road, Santa Clara and Willakenzie. Representative locations selected within these three distinct geographic areas will be monitored to characterize stormwater quality. Factors that will be considered when selecting monitoring locations will generally include the following as applicable:

- UIC system assessment, risk assessment and system characteristics
- Representative current and historic land use types
- Potential for illicit discharges

UICs in commercial areas and areas of relatively higher traffic volumes are assigned a higher prioritization on the City's decommissioning matrix and we expect these UICs to be decommissioned early in the permit term.

IV. Sampling Locations

Sampling will be conducted at the following locations[1]:

- Andersen Lane and Brianna Lane – City Structure ID 75938, DEQ Well # 35 (Permit Year 2 only)
- Corliss Lane – City Structure ID 73092, DEQ Well #43 (beginning Permit Year 3)
- Shenstone Drive and Tyson Lane – City Structure ID 73919, DEQ Well # 66
- Marjorie Avenue and Downing Street – City Structure ID 99302, DEQ Well # 105

Sampling locations may be changed to support sample and site characterization, mitigate any potential safety concerns, or because of difficulties related to site access and proper sample collection.

V. Sampling Frequency

Sampling will be conducted at a minimum of three (3) locations two (2) times per reporting period (July 1st through June 30th) during defined storm events.

VI. Sample Type

Grab sampling methods will be used to collect all UIC influent samples. This type of sample refers to an individual sample collected at a particular time and place that is representative of the conditions at the time of collection. These samples may be collected at any time stormwater runoff occurs for a storm event, though the collection times of the samples will be varied among sample events to eliminate bias.

VII. Analytes

Samples will be analyzed for listed action level pollutants listed in Schedule A – Table 1. Analytes, methodologies, and reporting limits are as follows:

Analytical Name	Reference Method	Quantitation Limit* (µg/L)	Action Level at Injection Point (µg/L)
Copper, Total	EPA 200.8	0.0449	1,300
Lead, Total	EPA 200.8	0.02	500
Zinc, Total	EPA 200.8	0.16	50,000
Benzo(a)pyrene	EPA 8270D/3520C	0.2	2
Pentachlorophenol	EPA 8270D/3520C	1.0	10

*Quantitation Limits may vary based on matrix interferences

Laboratory analysis for total lead, zinc, and copper will be done by the Regional Environmental Analytical Services Laboratory located at the Eugene/Springfield Regional Sewage Treatment Facility under the direction of the Laboratory Supervisor in the City of Eugene's Wastewater Division. The services of an external accredited laboratory will be used for the analysis of benzo(a)pyrene and pentachlorophenol.

[1] Sampling location "Andersen Lane and Brianna Lane" (utilized in permit Year 2) was changed to "Corliss Lane" beginning with Permit Year 3 due to the imminent decommissioning of the Andersen UIC cluster.

VIII. Storm Event Criteria

The following characteristics describe the ideal storm event that will be targeted for sampling. Storm events that do not meet these characteristics may be sampled to better characterize the nature of stormwater discharges to UICs.

Minimum Storm Event – Precipitation for a qualified storm event must be greater or equal to one tenth ($\geq$0.1) of an inch.

Antecedent Dry Period – When possible, samples must be collected after an antecedent dry period of a minimum of twenty-four (24) hours whereby no greater than one tenth (<0.1) of an inch of precipitation has fallen immediately preceding the onset of a qualified storm event.

Intra-Event Dry Period – Should rainfall cease for more than approximately six (6) hours after greater than one tenth ($\geq$0.1) of an inch of precipitation has been received, it is no longer considered the same storm event and the antecedent dry period must be met before a new sampling event can occur.

IX. Quality Assurance Plan, Standard Operating Procedures, and Methodology

The Eugene/Springfield Regional Sewage Treatment Facility's laboratory performs analytical services under a DEQ approved Quality Assurance Plan (QAP) that describes quality control procedures. All stormwater samples analyzed will follow the protocol specified in the QAP to ensure the quality of laboratory results. Any pollutants that cannot be analyzed by the Eugene/Springfield Regional Sewage Facility's laboratory will be contracted to laboratories that perform analytical services under an approved QAP.

All field sampling will be done following documented Standard Operating Procedures to ensure consistency, representative sample collection, and quality of results. Application of quality assurance/quality control (QA/QC) protocol for the collection of field samples will include chain-of-custody protocol, field instrument calibration techniques, collection of field duplicates, field blanks, and trip blanks as appropriate. The documents referenced in this section are controlled, maintained by the City of Eugene's Wastewater Division and are available upon request.

X. Data Management, Documentation, and Record-Keeping

The Eugene/Springfield Regional Sewage Treatment Facility maintains an Environmental Management System (EMS) for which it has earned certification under the International Organization for Standardization (ISO). Organizations that earn ISO certification under the 14001:2004 (E) standard commit to develop an environmental policy, establish objectives and processes to achieve policy commitments, take action as needed to improve its performance and demonstrate the conformity of the system to the requirements of the ISO standard. ISO 14001 elements include establishing, implementing and maintaining procedures applicable to legal requirements, documentation and records determined to be necessary to ensure effective planning, operation and control of processes, control of records and documents, evaluation of legal compliance, defining roles, responsibilities and authority of staff, competence and training requirements, and management review. The Eugene/Springfield Regional Sewage Facility is audited by internal and external auditors on an annual basis to ensure conformance and compliance to the policies and objectives of the program.

Documents and records associated with the stormwater elements are readily available upon request. All laboratory and field measurements collected under this plan including QA/QC will be controlled through the Eugene/Springfield Regional Sewage Treatment Facility's Laboratory Information Management System (LIMS), which has strict data entry requirements and access restrictions.

At a minimum, the following records will be kept for a minimum of 10 years and made available to DEQ upon request:

- The date, exact place, time and methods of sampling or measurements
- The name(s) of the individual(s) who performed the sampling or measurements
- The date(s) analysis were performed
- The name(s) of the individual(s) who performed the analyses
- The analytical techniques used
- The results of such analysis
- The nature and composition of all injected fluids until three years after completion of any plugging and decommissioning procedures
- Field notes
- Calibration and maintenance records
- All original strip chart recordings for continuous monitoring information
- All analyses of the data generated
- All reports required by the permit
- Records of all data used to complete the permit application

XI. Data Analysis

Multiple techniques are applicable to the analysis of stormwater data, including parametric and non-parametric statistical procedures, trend analysis, cluster techniques, etc. The techniques applied will largely depend on the characteristics of the data set and the types of comparisons desired. Commercial and non-commercial (e.g. IMB SPSS, USGS) software applications will be applied as needed. Application summaries and complete output information will accompany annual reports.

Data analysis will be performed by City of Eugene staff who have appropriate training and experience to assess laboratory and field data, or by consultants who are qualified to perform this task.

APPENDIX C

UIC Stormwater Monitoring Data Permit Year 9

Appendix C - UIC Stormwater Monitoring Data Permit Year 9

Lab Number	CPS Code	Location	Date	Time	Test Code	Test	Result	MDL	MRL	Units
WW03577	CSWEU04	Corliss Lane UIC (North Side) MH #73092	12/30/2020	13:01	CUUMS	Copper, Total	12.3	0.0346	0.40	ug/L
WW03577	CSWEU04	Corliss Lane UIC (North Side) MH #73092	12/30/2020	13:01	PBUMS	Lead, Total	2.10	0.0297	0.09	ug/L
WW03577	CSWEU04	Corliss Lane UIC (North Side) MH #73092	12/30/2020	13:01	ZNUMS	Zinc, Total	102	0.355	1.9	ug/L
WW03577	CSWEU04	Corliss Lane UIC (North Side) MH #73092	12/30/2020	13:01	PHF	pH Field	5.57	NA		pH Units
WW03577	CSWEU04	Corliss Lane UIC (North Side) MH #73092	12/30/2020	13:01	DO	Dissolved Oxygen	7.17	NA		mg/L
WW03578	CSWEU03	Shenstone Drive & Tyson Lane #73919	12/30/2020	13:15	CUUMS	Copper, Total	4.78	0.0346	0.40	ug/L
WW03578	CSWEU03	Shenstone Drive & Tyson Lane #73919	12/30/2020	13:15	PBUMS	Lead, Total	0.386	0.0297	0.09	ug/L
WW03578	CSWEU03	Shenstone Drive & Tyson Lane #73919	12/30/2020	13:15	ZNUMS	Zinc, Total	96.9	0.355	1.9	ug/L
WW03578	CSWEU03	Shenstone Drive & Tyson Lane #73919	12/30/2020	13:15	PHF	pH Field	6.64	NA		pH Units
WW03578	CSWEU03	Shenstone Drive & Tyson Lane #73919	12/30/2020	13:15	DO	Dissolved Oxygen	11.30	NA		mg/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	CUUMS	Copper, Total	1.88	0.0346	0.40	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	PBUMS	Lead, Total	0.063	0.0297	0.09	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	ZNUMS	Zinc, Total	293	0.355	1.9	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	PHF	pH Field	6.41	NA		pH Units
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	DO	Dissolved Oxygen	9.71	NA		mg/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	B_CUUMS	Copper, Total Blank	Not detected	0.0346	0.40	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	D_CUUMS	Copper, Total Dup Result	1.88	0.0346	0.40	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	P_CUUMS	Copper, Total Dup RPD	0.0			RPD
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	S_CUUMS	Copper, Total Spk Res	6.74			ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	A_CUUMS	Copper, Total Spk Amt	5.00			ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	R_CUUMS	Copper, Total Spk Rec	97.2			%
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	LMCUUMS	Copper, Total LCS-CL-ICS-1	4.04			ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	B_PBUMS	Lead, Total Blank	Not detected	0.0297	0.09	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	D_PBUMS	Lead, Total Dup Res	0.060	0.0297	0.09	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	P_PBUMS	Lead, Total Dup RPD	4.9			RPD
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	S_PBUMS	Lead, Total Spk Res	4.92			ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	A_PBUMS	Lead, Total Spk Amt	5.00			ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	R_PBUMS	Lead, Total Spk Rec	97.1			%
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	LMPBUMS	Lead, Total LCS-CL-ICS-1	4.08			ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	B_ZNUMS	Zinc, Total Blank	Not detected	0.355	1.9	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	D_ZNUMS	Zinc, Total Dup Res	289	0.355	1.9	ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	P_ZNUMS	Zinc, Total Dup RPD	1.4			RPD
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	S_ZNUMS	Zinc, Total Spk Res	297			ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	A_ZNUMS	Zinc, Total Spk Amt	5.00			ug/L
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	R_ZNUMS	Zinc, Total Spk Rec	80.0			%
WW03579	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	LMZNUMS	Zinc, Total LCS-CL-ICS-1	4.12			ug/L
WW03582	CSWEU04	Corliss Lane UIC (North Side) MH #73092	12/30/2020	13:01	$8270D-UIC	Semivolatile Organics	_TITLE_			ug/L
WW03582	CSWEU04	Corliss Lane UIC (North Side) MH #73092	12/30/2020	13:01	$8270D-UIC	Pentachlorophenol	Not detected	0.34		ug/L
WW03582	CSWEU04	Corliss Lane UIC (North Side) MH #73092	12/30/2020	13:01	$8270D-UIC	Benzo(a)pyrene	Not detected	0.031		ug/L
WW03583	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	$8270D-UIC	Semivolatile Organics	_TITLE_			ug/L
WW03583	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	$8270D-UIC	Pentachlorophenol	Not detected	0.34		ug/L
WW03583	CSWEU02	Marjorie Ave. & Downing St. #99302	12/30/2020	13:38	$8270D-UIC	Benzo(a)pyrene	Not detected	0.031		ug/L
WW03584	CSWEU03	Shenstone Drive & Tyson Lane #73919	12/30/2020	13:15	$8270D-UIC	Semivolatile Organics	_TITLE_			ug/L
WW03584	CSWEU03	Shenstone Drive & Tyson Lane #73919	12/30/2020	13:15	$8270D-UIC	Pentachlorophenol	Not detected	0.34		ug/L

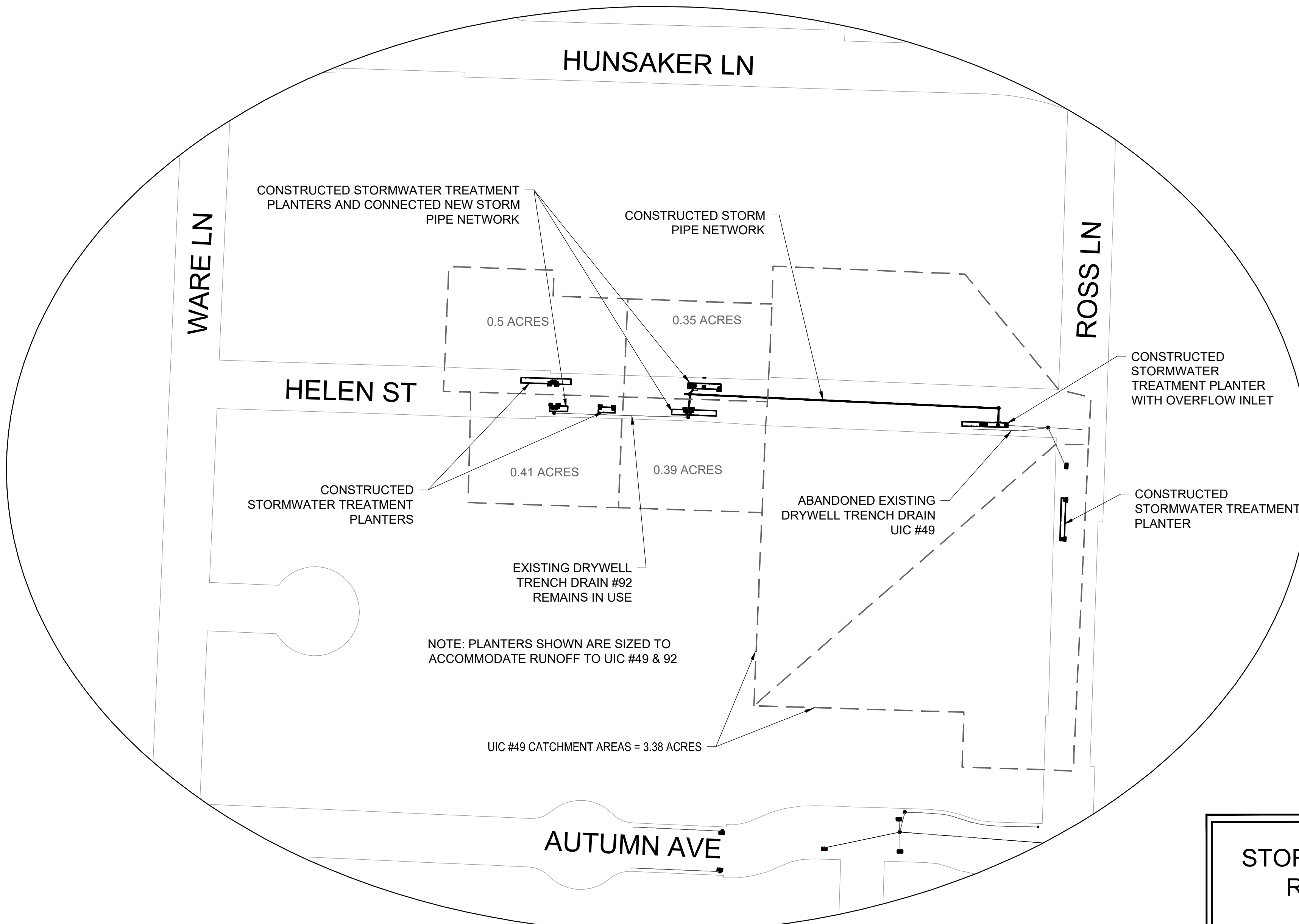
Appendix C - UIC Stormwater Monitoring Data Permit Year 9

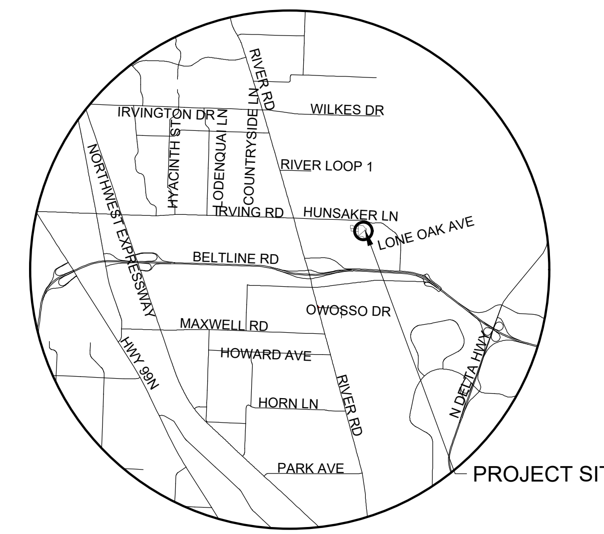
Lab Number	CPS Code	Location	Date	Time	Test Code	Test	Result	MDL	MRL	Units
WW03584	CSWEU03	Shenstone Drive & Tyson Lane #73919	12/30/2020	13:15	$8270D-UIC	Benzo(a)pyrene	Not detected	0.031		ug/L
WW03046	CSWEU04	Corliss Lane UIC (North Side) MH #73092	11/13/2020	09:12	CUUMS	Copper, Total	6.99	0.0346	0.40	ug/L
WW03046	CSWEU04	Corliss Lane UIC (North Side) MH #73092	11/13/2020	09:12	PBUMS	Lead, Total	1.87	0.0297	0.09	ug/L
WW03046	CSWEU04	Corliss Lane UIC (North Side) MH #73092	11/13/2020	09:12	ZNUMS	Zinc, Total	47.7	0.355	1.9	ug/L
WW03046	CSWEU04	Corliss Lane UIC (North Side) MH #73092	11/13/2020	09:12	PHF	pH Field	5.99	NA		pH Units
WW03046	CSWEU04	Corliss Lane UIC (North Side) MH #73092	11/13/2020	09:12	DO	Dissolved Oxygen	9.62	NA		mg/L
WW03047	CSWEU02	Marjorie Ave. & Downing St. #99302	11/13/2020	09:52	CUUMS	Copper, Total	2.48	0.0346	0.40	ug/L
WW03047	CSWEU02	Marjorie Ave. & Downing St. #99302	11/13/2020	09:52	PBUMS	Lead, Total	0.116	0.0297	0.09	ug/L
WW03047	CSWEU02	Marjorie Ave. & Downing St. #99302	11/13/2020	09:52	ZNUMS	Zinc, Total	23.1	0.355	1.9	ug/L
WW03047	CSWEU02	Marjorie Ave. & Downing St. #99302	11/13/2020	09:52	PHF	pH Field	6.32	NA		pH Units
WW03047	CSWEU02	Marjorie Ave. & Downing St. #99302	11/13/2020	09:52	DO	Dissolved Oxygen	7.89	NA		mg/L
WW03048	CSWEU03	Shenstone Drive & Tyson Lane #73919	11/13/2020	09:29	CUUMS	Copper, Total	1.91	0.0346	0.40	ug/L
WW03048	CSWEU03	Shenstone Drive & Tyson Lane #73919	11/13/2020	09:29	PBUMS	Lead, Total	0.090	0.0297	0.09	ug/L
WW03048	CSWEU03	Shenstone Drive & Tyson Lane #73919	11/13/2020	09:29	ZNUMS	Zinc, Total	19.5	0.355	1.9	ug/L
WW03048	CSWEU03	Shenstone Drive & Tyson Lane #73919	11/13/2020	09:29	PHF	pH Field	6.34	NA		pH Units
WW03048	CSWEU03	Shenstone Drive & Tyson Lane #73919	11/13/2020	09:29	DO	Dissolved Oxygen	9.51	NA		mg/L
WW03051	CSWEU04	Corliss Lane UIC (North Side) MH #73092	11/13/2020	09:12	$8270D-UIC	Semivolatile Organics	_TITLE_			ug/L
WW03051	CSWEU04	Corliss Lane UIC (North Side) MH #73092	11/13/2020	09:12	$8270D-UIC	Pentachlorophenol	Not detected	0.34		ug/L
WW03051	CSWEU04	Corliss Lane UIC (North Side) MH #73092	11/13/2020	09:12	$8270D-UIC	Benzo(a)pyrene	Not detected	0.031		ug/L
WW03052	CSWEU02	Marjorie Ave. & Downing St. #99302	11/13/2020	09:52	$8270D-UIC	Semivolatile Organics	_TITLE_			ug/L
WW03052	CSWEU02	Marjorie Ave. & Downing St. #99302	11/13/2020	09:52	$8270D-UIC	Pentachlorophenol	Not detected	0.34		ug/L
WW03052	CSWEU02	Marjorie Ave. & Downing St. #99302	11/13/2020	09:52	$8270D-UIC	Benzo(a)pyrene	Not detected	0.031		ug/L
WW03053	CSWEU03	Shenstone Drive & Tyson Lane #73919	11/13/2020	09:29	$8270D-UIC	Semivolatile Organics	_TITLE_			ug/L
WW03053	CSWEU03	Shenstone Drive & Tyson Lane #73919	11/13/2020	09:29	$8270D-UIC	Pentachlorophenol	Not detected	0.34		ug/L
WW03053	CSWEU03	Shenstone Drive & Tyson Lane #73919	11/13/2020	09:29	$8270D-UIC	Benzo(a)pyrene	Not detected	0.031		ug/L

APPENDIX D

Schematic: 2021 Drywell Elimination Program -- Autumn Area

2021 DRYWELL ELIMINATION PROGRAM
AUTUMN AREA
PROJECT #900221





VICINITY MAP
NTS

— — — — CATCHMENT BOUNDARY

N

STORMWATER BASIN MASTER PLAN
RIVER ROAD - SANTA CLARA
WO-3-UIC

DATE	5/21/2021
SCALE	NTS
DESIGNED BY	J. PINKHAM
DRAWN BY	S. SPAHT
CHECKED BY	R. VAICUNAS
PROJECT NO.	900221

REV.	DATE	DESCRIPTION	BY

2021 DRYWELL ELIMINATION PROGRAM
AUTUMN AREA
UIC REPORT

CITY OF
EUGENE, OREGON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

Eugene

NAD83/NAVD88

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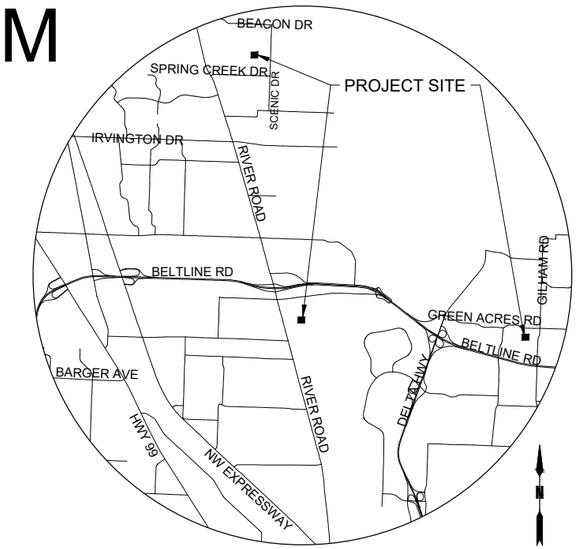
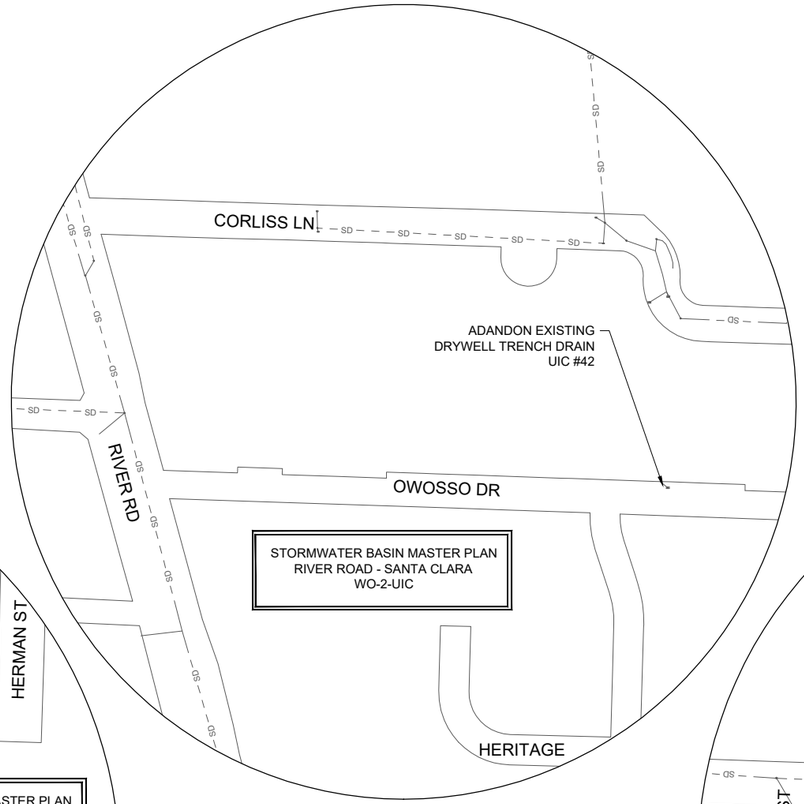
APPENDIX E

Schematic: 2022 Drywell Elimination Program -- Holly, Calumet, Owosso Areas

2022 DRYWELL ELIMINATION PROGRAM
HOLLY, CALUMET, OWOSSO AREAS
PROJECT #900276



VICINITY MAP



N

						BY
						DESCRIPTION
						DATE
						REV.

DATE	12/20/2021
SCALE	NTS
DESIGNED BY	J. PINKHAM
DRAWN BY	S. SPAHT
CHECKED BY	R. VICUNAS
PROJECT NO.	900276

2022 DRYWELL ELIMINATION PROGRAM
HOLLY-CALUMET-OWOSSO AREAS

COVER

CITY OF
EUGENE, OREGON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

NAD83/NAVD88

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